

**Notice of Allowability**

Application No.

10/092,889

Examiner

Sonya Wright

Applicant(s)

WEHNER ET AL.

Art Unit

1626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to \_\_\_\_.
2. ☒ The allowed claim(s) is/are 16, 7, 8, 9, 10, 18, 20, 17, 19, 21, 23, 22, and 13 now claims 1-13 respectively.
3. ☐ The drawings filed on \_\_\_\_ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                               | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date ____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date ____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material         | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|  | 9. <input type="checkbox"/> Other ____.   |

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Paul M. Booth on May 10, 2004.

The application has been amended as follows:

Please amend the claims as shown on the following pages:

Claims 1-6 (Canceled).

7. (currently amended) The hydantoin of claim 16, wherein R<sup>1</sup> is (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>3</sub>-C<sub>7</sub>)-cycloalkyl or (C<sub>3</sub>-C<sub>7</sub>)-cycloalkyl-(C<sub>1</sub>-C<sub>4</sub>)-alkyl.

8. (previously presented) The hydantoin of claim 7, wherein R<sup>1</sup> is isobutyl or cyclopropylmethyl.

9. (original) The hydantoin of claim 7, wherein the carbon atom carrying the R<sup>1</sup> residue has an S configuration.

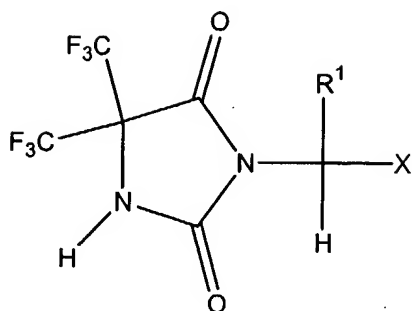
10. (currently amended) The hydantoin of claim 16, wherein ~~the carboxylic acid derivative~~ X is a (C<sub>1</sub>-C<sub>6</sub>)-alkyl carboxylate ester.

Claims 11-12 (Canceled).

13. (currently amended) The process of claim 22, wherein the reaction is carried out in an inert solvent and at a temperature from about 20°C to about 80°C.

Claims 14-15 (Canceled).

16. (New) A hydantoin having the formula:

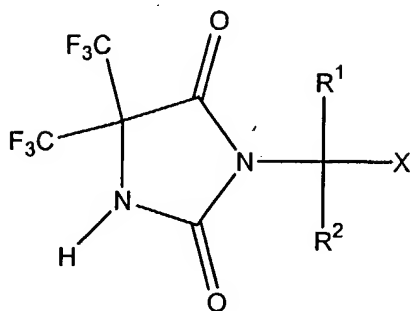


in any stereoisomeric or tautomeric form,

wherein  $R^1$  is hydrogen or an unsubstituted or substituted residue selected from the group consisting of (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>2</sub>-C<sub>6</sub>)-alkenyl, (C<sub>2</sub>-C<sub>6</sub>)-alkynyl, (C<sub>3</sub>-C<sub>7</sub>)-cycloalkyl, (C<sub>3</sub>-C<sub>7</sub>)-cycloalkyl-(C<sub>1</sub>-C<sub>4</sub>)-alkyl, (C<sub>6</sub>-C<sub>12</sub>)-aryl, (C<sub>6</sub>-C<sub>12</sub>)-aryl-(C<sub>1</sub>-C<sub>4</sub>)-alkyl, heteroaryl and heteroaryl-(C<sub>1</sub>-C<sub>4</sub>)-alkyl,

wherein X is COOH, a metal salt of COOH, an ammonium salt of COOH, a C<sub>1</sub>-C<sub>6</sub> alkyl carboxylate ester, a benzyl carboxylate ester, -CONH<sub>2</sub>, -CN, -CHO, or -CH<sub>2</sub>OH or a salt or derivative thereof, wherein said derivative is an ester, an amide, a nitrile, an aldehyde or a hydroxymethyl group.

17. (New) A hydantoin having the formula:



wherein  $R^1$  and  $R^2$  independently are selected from the group consisting of hydrogen or an unsubstituted or substituted residue selected from the group consisting of (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>2</sub>-C<sub>6</sub>)-alkenyl, (C<sub>2</sub>-C<sub>6</sub>)-alkynyl, (C<sub>3</sub>-C<sub>7</sub>)-cycloalkyl, (C<sub>3</sub>-C<sub>7</sub>)-cycloalkyl-(C<sub>1</sub>-C<sub>4</sub>)-alkyl, (C<sub>6</sub>-C<sub>12</sub>)-aryl, (C<sub>6</sub>-C<sub>12</sub>)-aryl-(C<sub>1</sub>-C<sub>4</sub>)-alkyl, heteroaryl and heteroaryl-(C<sub>1</sub>-C<sub>4</sub>)-alkyl,

wherein X is COOH, a metal salt of COOH, an ammonium salt of COOH, a C<sub>1</sub>-C<sub>6</sub> alkyl carboxylate ester, a benzyl carboxylate ester, -CONH<sub>2</sub>, -CN, -CHO, or -CH<sub>2</sub>OH or a salt or derivative thereof, wherein said derivative is an ester, an amide, a nitrile, an aldehyde or a hydroxymethyl group.

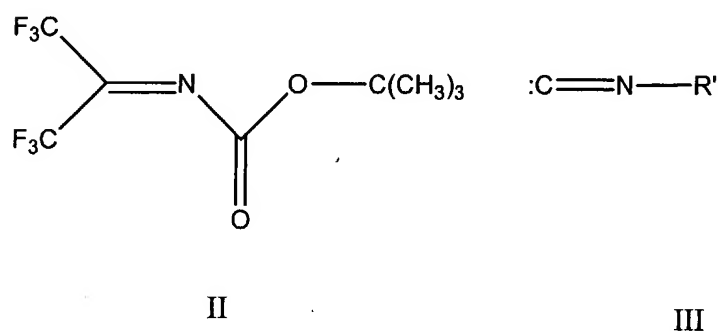
18. (New) The hydantoin according to claim 16, wherein X is COOH, ~~or a salt thereof~~ a metal salt of COOH, or an ammonium salt of COOH.

19. (New) The hydantoin according to claim 17, wherein X is COOH ~~or a salt thereof~~ a metal salt of COOH, or an ammonium salt of COOH.

20. (New) The hydantoin according to claim 16, wherein X is ~~an ester or an amide~~ a C<sub>1</sub>-C<sub>6</sub> alkyl carboxylate ester, a benzyl carboxylate ester, or -CONH<sub>2</sub>.

21. (New) The hydantoin according to claim 17, wherein X is ~~an ester or an amide~~ a C<sub>1</sub>-C<sub>6</sub> alkyl carboxylate ester, a benzyl carboxylate ester, or -CONH<sub>2</sub>.

22. (New) A process for preparing a hydantoin according to claim 17, which comprises reacting the compound of formula II with a compound of formula III



wherein R' is -C(R<sup>1</sup>)(R<sup>2</sup>)-X',

wherein R<sup>1</sup> and R<sup>2</sup> independently are selected from the group consisting of hydrogen or an unsubstituted or substituted residue selected from the group consisting of (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>2</sub>-C<sub>6</sub>)-alkenyl, (C<sub>2</sub>-C<sub>6</sub>)-alkynyl, (C<sub>3</sub>-C<sub>7</sub>)-cycloalkyl, (C<sub>3</sub>-C<sub>7</sub>)-cycloalkyl-, (C<sub>1</sub>-C<sub>4</sub>)-alkyl, (C<sub>6</sub>-C<sub>12</sub>)-aryl, (C<sub>6</sub>-C<sub>12</sub>)-aryl-(C<sub>1</sub>-C<sub>4</sub>)-alkyl, heteroaryl and heteroaryl-(C<sub>1</sub>-C<sub>4</sub>)-alkyl, and

wherein X' is selected from the group consisting of ~~a carboxylic acid ester, an amide, a nitrile, an aldehyde and a hydroxymethyl group~~, a C<sub>1</sub>-C<sub>6</sub> alkyl carboxylate ester, a benzyl carboxylate ester, -CONH<sub>2</sub>, -CN, -CHO, or -CH<sub>2</sub>OH.

23. (new) The hydantoin of claim 17, wherein ~~the carboxylic acid derivative X~~ is a (C<sub>1</sub>-C<sub>6</sub>)-alkyl carboxylate ester.

The following is an examiner's statement of reasons for allowance: The closest prior art of record, US Patent 5,939,556, Zoller et al., teaches hydantoin compounds with a 4-cyanophenyl group and a methyl group in the 4-position of the dioxoimidazolidine. See Zoller et al., column 15, lines 34 and 35. The instant claims disclose hydantoin compounds with two trifluoromethyl groups in the 4-position of the dioxoimidazolidine. The instant compounds are patentable over Zoller et al., because Zoller et al. neither teach nor suggest the two trifluoromethyl groups in the 4-position of the dioxoimidazolidine.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sonya Wright, whose telephone number is (571) 272-0711. The examiner can normally be reached on Monday-Friday from 8:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Joseph K. McKane, can be reached at (571) 272-0699. The Official fax phone number for this Group is (703) 872-9306.

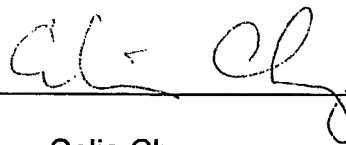
When filing a FAX in Technology Center 1600, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for

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draft documents and other communications with the PTO that are not for entry into the file of the application. This will expedite processing of your papers.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [joseph.mckane@uspto.gov]. All Internet e-mail communications will be made of record in the application file. PTO employees will not communicate with applicant via Internet e-mail where sensitive data will be exchanged or where there exists a possibility that sensitive data could be identified unless there is of record an express waiver of the confidentiality requirements under 35 U.S.C. 122 by the applicant. See the Interim Internet Usage Policy published by the Patent and Trademark Office Official Gazette on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application should be directed to Technology Center 1600 at (571) 272-1600.

A handwritten signature in dark ink, appearing to read 'CL Chang', is written over a horizontal line.

Celia Chang

Primary Examiner

Group 1600

Sonya Wright

May 11, 2004